Chapter

10

PLANS AND STAGING PROGRAM

Chapter

10

PLANS & STAGING PROGRAM

for the Airport Master Plan at Grand Canyon West Airport

10.0 GENERAL

In Chapters V and VI, "Facility Requirements" and "Development Alternatives" an evaluation was made of future options for airside and landside development. This effort resulted in the selection of an alternative for future airport improvements at the existing Grand Canyon West Airport site. The purpose of this Chapter is to describe the Airport Layout Plan Drawing Set that depicts the development selected by the Sponsor to be accomplished at the existing site.

The set of plans, referred to as the Airport Layout Plan, has been prepared to graphically depict the recommendations for airfield layout, disposition of obstructions, and future use of land in the vicinity of the airport. An 11" x 17" set of these drawings is included at the end of this Chapter and include:

- Cover Sheet
- Airport Layout Plan Drawing
- Building Area Plan Drawing
- Airport Airspace Drawing
- Inner Portion of the Approach Surface Drawing
- Land Use Drawing
- Exhibit "A" Property Map

10.1 DESIGN STANDARDS

The Grand Canyon West Airport has been identified as a general aviation type facility with an existing Airport Reference Code (ARC) of B-I. The future ARC is an A-II based on increased operations by Cessna 208, and other A-II, aircraft. Runway 17/35 will be designated as an A-II runway which is planned for use by aircraft with wingspans of less than 79 feet and approach speeds of less than 91 knots and weighing less than 12,500 pounds. Advisory Circulars published by the FAA have been used to

provide general guidance in the overall planning effort. These guidelines are designed to provide flexibility in application to ensure the safe, economic, and efficient use of the airport.

In order to meet the design standards for an A-II runway grading of a Runway Safety Area 150 feet wide and 300 feet beyond the runway ends will be required and a 1,000 foot section of Buck and Doe Road will require relocation. A modification to standards will be necessary for the planned runway-apron separation. The separation standard for an A-II runway is 250 feet; however, due to the proximity of the terminal building, paving the apron in its existing location will not enable 250 feet separation. The planned separation is 164 feet, which provides an equivalent level of safety for an aircraft with a 51.8 foot wingspan, the Cessna 208, as does a 250 foot separation for an aircraft with a 79 foot wingspan. These items, along with the paving of the existing runway, are depicted in the Airport Layout Plan Drawing Set.

10.2 AIRPORT LAYOUT PLAN DRAWING

The Airport Layout Plan (ALP) drawing graphically presents the initial and ultimate airport layout and depicts the recommended improvements which will enable the airport to meet forecasted aviation demand. Detailed airport and runway data are provided on the ALP to facilitate the interpretation of the master plan recommendations.

The Airport Layout Plan shows a number of airport improvements associated with both the airfield and the landside area. The improvements for the landside area are illustrated in more detail and at a larger scale on the Building Area Plan drawing and are discussed later in this Chapter.

10.3 BUILDING AREA PLAN

The Building Area Plan represents a refinement of the selected development configuration and provides a plan for construction of facilities to meet forecasted aviation demand. Included in the building area plan are the proposed apron configuration, exit taxiways, and existing building infrastructure. The existing building area will accommodate short-term demand without disrupting current airport operations.

10.4 AIRPORT AIRSPACE DRAWING

The Airport Airspace Drawing depicts a plan view of the airport FAR Part 77 surfaces and profiles of the Part 77 approach surfaces for the ultimate runway condition. The existing and planned approaches to Runways 17 and 35 are visual with slopes of 20 to 1 for a distance of 5,000 feet. The plans and profiles facilitate identification of obstructions, roadways, and buildings that lie within the confines of the Part 77 Airspace and the approach surfaces of each runway.

10.5 INNER PORTION OF THE APPROACH SURFACES DRAWING

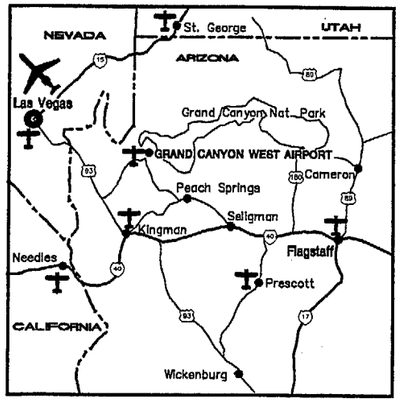
This drawing provides a larger scale plan and profile of the inner portion of the approach surfaces, portion to which the approach slope reached 100 feet in height, and the Runway Protection Zones for each existing and planned runway end. The plan depicts the physical features in the vicinity of each runway end, including topographic changes, roadways, and trees. The dimensions and slopes of approach surfaces are functions of the runway service category and the approach classification.

10.6 LAND USE PLAN

The Land Use Plan depicts the zoning regions within the airport vicinity and those land uses authorized by the Hualapai Tribe. The Tribe, in coordination with the FAA, state, and local governments, should strive to coincide zoning regions with the compatible land uses outlined in Federal Aviation Regulation 150/5020-1, "Noise Control and Compatibility Planning for Airports".

10.7 EXHIBIT "A" PROPERTY MAP

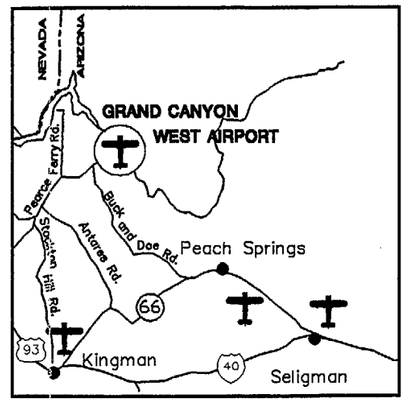
The Exhibit "A" Property Map identifies the ownership or interests in each property tract located within the airport boundaries and those required for future aeronautical uses or development. The Hualapai Tribe should designate adequate airport property boundaries to include runway and taxiway safety areas, object free zones, and runway protection zones.



LOCATION MAP

GRAND CANYON WEST AIRPORT

MOHAVE COUNTY, ARIZONA



VICINITY MAP

ARMSTRONG PROJECT NO. 945465

INDEX

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970·242·0101 fax 970·241·1769

LEGEND

- EXISTING DEVELOPMENT
- EXISTING STRUCTURE
- FUTURE DEVELOPMENT
- AIRPORT PROPERTY LINE (APL)
- FUTURE AIRPORT PROPERTY LINE
- RUNWAY PROTECTION ZONE (RPZ)
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE ZONE (ROFZ)
- RUNWAY OBJECT FREE AREA (ROFA)
- BUILDING RESTRICTION LINE (BRL)
- 4600 EXISTING CONTOURS
- EXISTING ROAD (UNIMPROVED)
- AIRPORT REFERENCE POINT (ARP)
- WIND SOCK
- 4786.74 TEA CONTROL POINT

RUNWAY DATA

ITEM	RUNWAY 17/35 EXISTING	RUNWAY 17/35 FUTURE
APPROACH VISIBILITY MINIMUMS	VISUAL	VISUAL
FAR PART 77 APPROACH CATEGORY	VISUAL/UTILITY	VISUAL/UTILITY
FAR PART 77 APPROACH SLOPE	RWY 17 20:1 RWY 35 20:1	RWY 17 20:1 RWY 35 20:1
DIMENSIONS (WIDTH & LENGTH)	100 x 5200	75 x 5200
PAVEMENT TYPE	DIRT	ASPHALT
PAVEMENT STRENGTH (LBS)	N/A	12,500 SWG
RUNWAY LIGHTING	NONE	NONE
RUNWAY MARKING	NONE	VISUAL
PERCENT GRADIENT	1.53%	1.53%
MAXIMUM GRADE	2.34%	2.34%
LINE OF SIGHT REQUIREMENTS	MET	MET
% WIND COVERAGE 10.5 KNOT 13.0 KNOT	92.91% 96.19%	92.91% 96.19%
VISUAL APPROACH AIDS	NONE	NONE
NAVIGATIONAL AIDS	NONE	NONE
AIRPORT REFERENCE CODE	B-I	A-II
CRITICAL AIRCRAFT	CESSNA 402	CESSNA 208
WINGSPAN (FT.)	44	51.8
APPROACH SPEED (KNOTS)	95	72
WEIGHT (LBS.)	6850	7000

RUNWAY DATA (CONT.)

ITEM	RUNWAY 17/35 EXISTING		RUNWAY 17/35 FUTURE	
LENGTH OF HAUL IF CRITICAL AIRCRAFT OVER 60K LBS	N/A		N/A	
RUNWAY SAFETY AREA (RSA) WIDTH	120'		150'	
RUNWAY SAFETY AREA (RSA) LENGTH BEYOND RWY END	240'		300'	
RUNWAY OBJECT FREE AREA (ROFA) WIDTH	400'		500'	
RUNWAY OBJECT FREE AREA (ROFA) LENGTH BEYOND END	240'		300'	
RUNWAY OBJECT FREE ZONE (ROFZ)	PENETRATIONS		NO PENETRATIONS	
ROFZ WIDTH	250		250	
ROFZ LENGTH BEYOND END	200		200	
RUNWAY ELEVATIONS	RWY 17	RWY 35	RWY 17	RWY 35
RUNWAY END	4754.79	4825.74	4754.79	4825.74
DISPLACED THRESHOLD (DT)	N/A	N/A	N/A	N/A
TOUCHDOWN ZONE (TDZ)	4762.94	4823.06	4762.94	4823.06
RUNWAY INTERSECTION	N/A	N/A	N/A	N/A
RUNWAY HIGH POINT	4825.74	4825.74	4825.74	4825.74
RUNWAY LOW POINT	4754.79	4754.79	4754.79	4754.79
DECLARED DISTANCES	N/A		N/A	

RUNWAY END COORDINATES NAD'83

RUNWAY		EXISTING	FUTURE
17	LATITUDE	35° 59' 29.26"	35° 59' 29.27"
	LONGITUDE	113° 48' 58.67"	113° 48' 58.82"
35	LATITUDE	35° 58' 38.05"	35° 58' 38.06"
	LONGITUDE	113° 49' 04.44"	113° 49' 04.59"

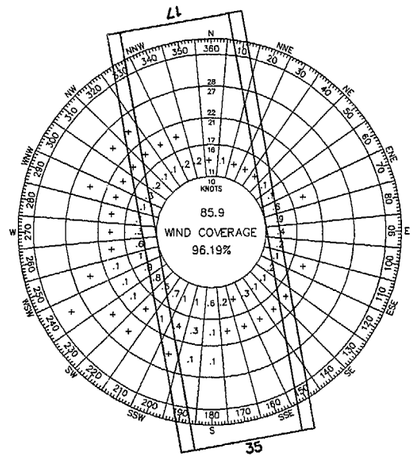
AIRPORT FACILITIES LIST

EXISTING

1. TERMINAL BUILDING
2. PILOTS LOUNGE
3. PORTABLE LAVATORIES
4. SEPTIC SYSTEM
5. GENERATOR SHED
6. WATER TANKS
7. PROPANE TANKS
8. WATER PUMP
9. AUTO PARKING
10. WIND SOCK
11. EMPLOYEE HOUSING TRAILERS

METRIC CONVERSIONS

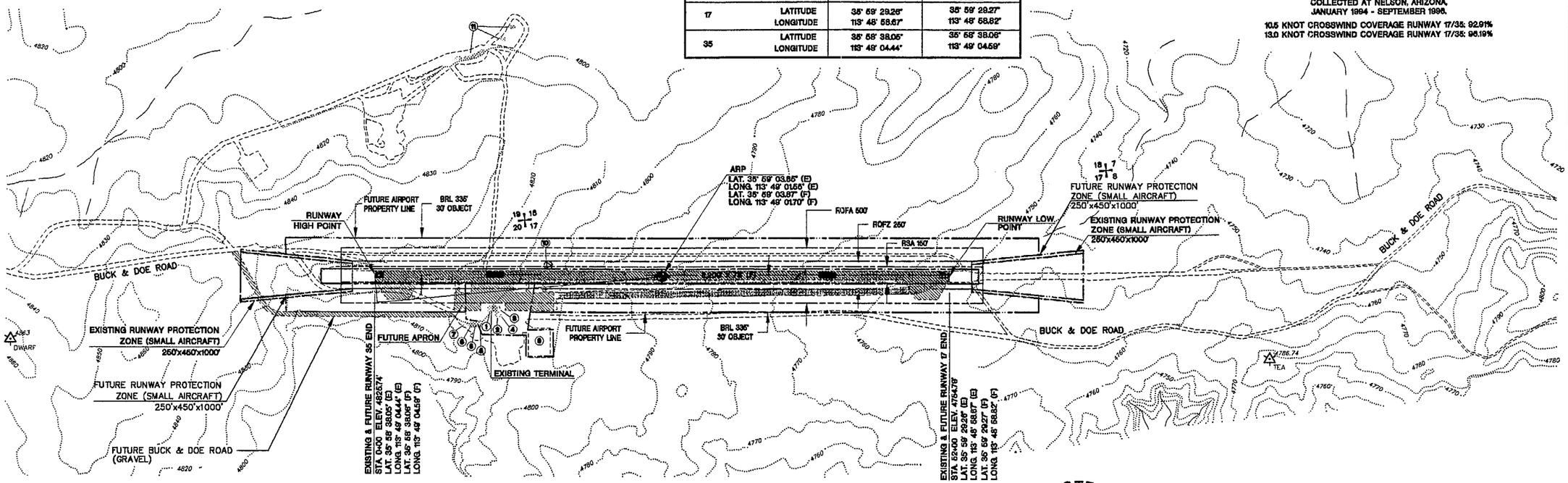
1 MILE = 1.6093 Km
1 YARD = 0.9144 METER
1 FOOT = 0.3048 METER
1 INCH = 2.54 CENTIMETERS



ALL WEATHER WIND ROSE

SOURCE: ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY.
COLLECTED AT NELSON, ARIZONA.
JANUARY 1994 - SEPTEMBER 1998.

10.5 KNOT CROSSWIND COVERAGE RUNWAY 17/35: 92.91%
13.0 KNOT CROSSWIND COVERAGE RUNWAY 17/35: 96.19%



AIRPORT DATA

		EXISTING	FUTURE
AIRPORT ELEVATION		4825.58'	4825.58'
AIRPORT REFERENCE POINT* (ARP) COORDINATES NAD'83	LAT	35° 59' 03.65"	35° 59' 03.87"
	LONG	113° 49' 01.55"	113° 49' 01.70"
MEAN MAX. TEMP-HOTTEST MONTH		97.5° F JULY	97.5° F JULY
WIND COVERAGE	10.5 KNOT	92.91%	92.91%
	13.0 KNOT	96.19%	96.19%
MAGNETIC VARIATION & DATE		15° / 1998	15° / 1998
AIRPORT REFERENCE CODE		B-I	A-II
NPIAS ROLE SERVICE LEVEL		GA	GA
TAXIWAY LIGHTING		NONE	NONE
TAXIWAY MARKING		NONE	VISUAL
AIRPORT & TERMINAL NAVAIDS		NONE	NONE

NON-STANDARD CONDITIONS

ITEM	AIRPORT REFERENCE CODE EXISTING	AIRPORT REFERENCE CODE ULTIMATE	STANDARD EXISTING	STANDARD ULTIMATE	NONSTANDARD CONDITION	PROPOSED ACTION/ COMPLETION DATE
RUNWAY TAXIWAY SEPARATION	B-I	A-II	150	225	EXISTING RUNWAY-TAXIWAY SEPARATION IS 150'	ABANDON TAXIWAY
RUNWAY AIRCRAFT PARKING SEPARATION	B-I	A-II	125	250	SEPARATION OF 164' BASED ON WINGSPAN OF CRITICAL AIRCRAFT	MODIFICATION TO STANDARD
TRANSITIONAL SURFACE	B-I	A-II	TRANSITIONAL SURFACE 7:1	TRANSITIONAL SURFACE 7:1	BUCK & DOE ROAD WITHIN ROFA AND TRANSITIONAL SURFACE	RELOCATE ROAD
ROFA	B-I	A-II	250	500	AIRCRAFT PARKING APRON WITHIN ROFA	RELOCATE AIRPORT OR RELOCATE APRON

ARMSTRONG CONSULTANTS

MAGNETIC DECLINATION
15° 00' 00"
SOURCE: ACI 1998

GRAPHIC SCALE
500 0 250 500 1000 2000
(IN FEET)
1 inch = 500 ft.

APPROVED BY:

EARL HAVATONE — DATE
TRIBAL CHAIRMAN, HUALAPAI TRIBE

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1769

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

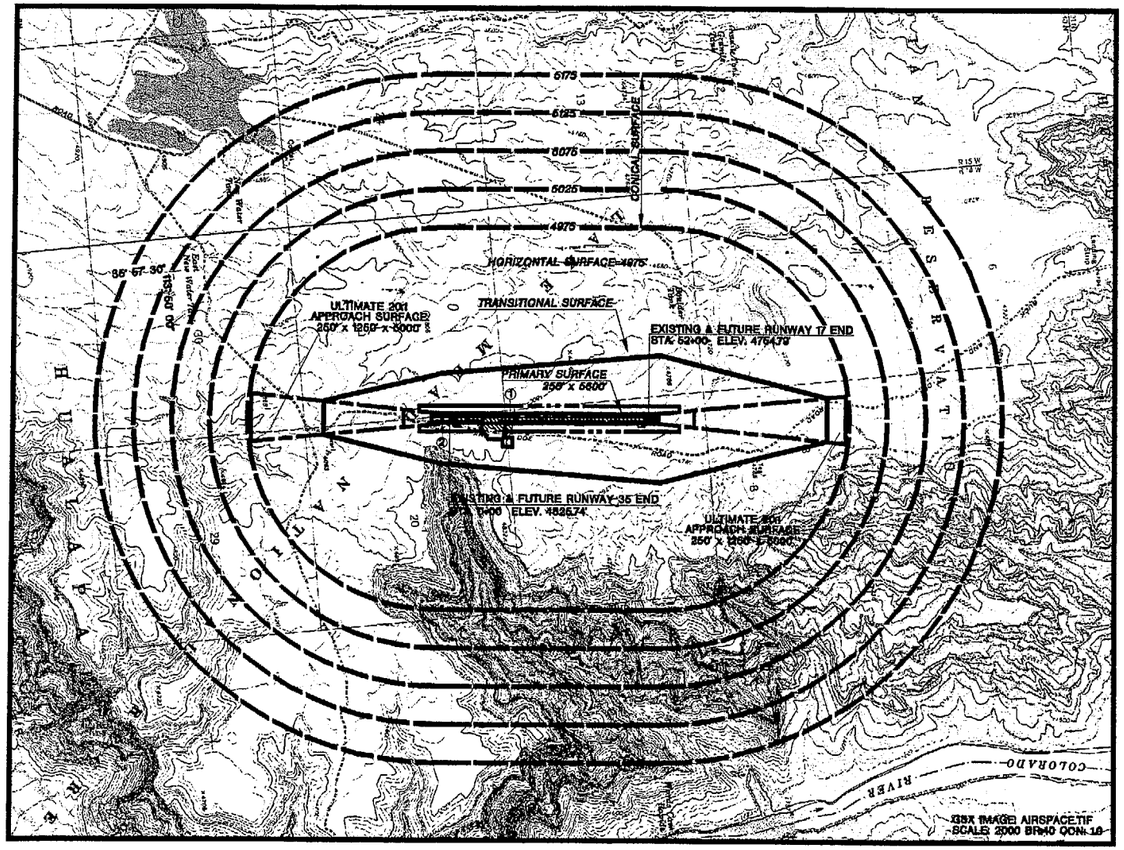
Revisions:

Project No: 945465
Date: 10/06/97
File Name: ALP

Drawn: MHM
Checked: DAC
Approved: EAA

AIRPORT LAYOUT PLAN

Sheet: 2 of 8



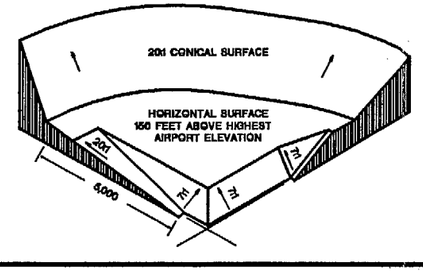
PENETRATIONS						
SURFACE		OBJECT	TOP ELEVATION	AMOUNT OF PENETRATION		PROPOSED ACTION
PRIMARY		1) WINDSOCK	4827	+17		NONE
				PART 77		
				EXISTING	FUTURE	
APPROACH	RWY 35	2) BUCK & DOE ROAD	4837.54	+15	0	RELOCATE ROAD

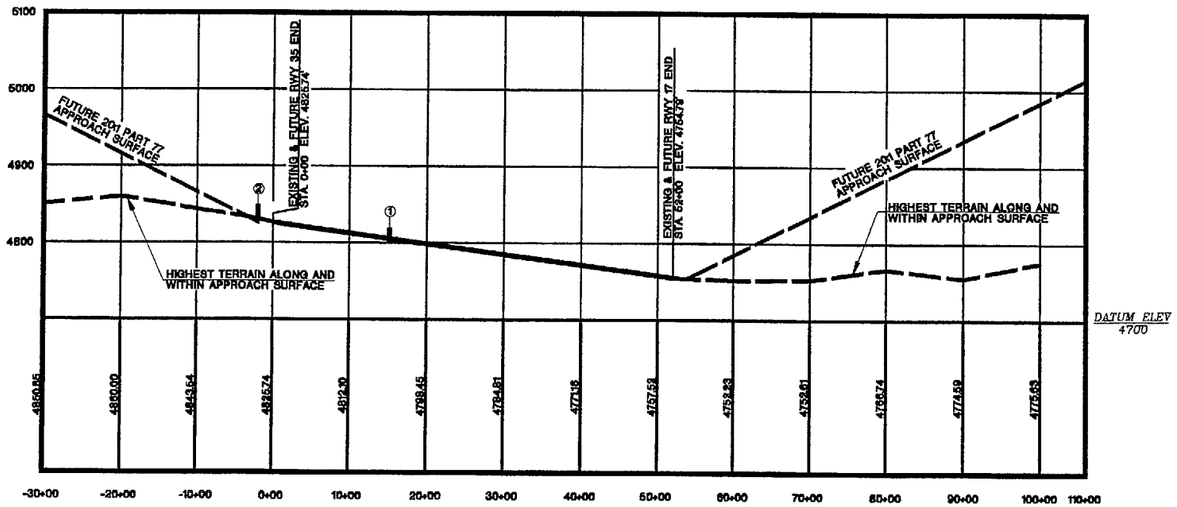
NOTES: NO CURRENT HEIGHT RESTRICTION ZONING IN EFFECT. REFER TO "INNER PORTION OF THE APPROACH SURFACE" DRAWING FOR DETAILS ON ANY CLOSE-IN APPROACH OBSTRUCTIONS.

LEGEND

- EXISTING DEVELOPMENT
- EXISTING AIRPORT PROPERTY LINE (APL)
- FUTURE AIRPORT PROPERTY LINE (FAPL)
- TRANSITIONAL SURFACE
- PRIMARY SURFACE
- CONICAL SURFACE
- APPROACH SURFACE (PLAN)
- APPROACH SURFACE (PROFILE)
- COMPOSITE SURFACE ALONG HIGHEST TERRAIN (PROFILE)
- FUTURE DEVELOPMENT

TYPICAL ISOMETRIC VIEW OF FAR PART 77 SURFACES





RUNWAY 17/35
HORIZONTAL SCALE: 1" = 1000'
VERTICAL SCALE: 1" = 100'

ARMSTRONG CONSULTANTS

MAGNETIC DECLINATION
15° 00' 00"
SOURCE: ACI 1998

GRAPHIC SCALE

2000 0 1000 2000 4000 6000
(IN FEET)
1 inch = 2000 ft.

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Road Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1769

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

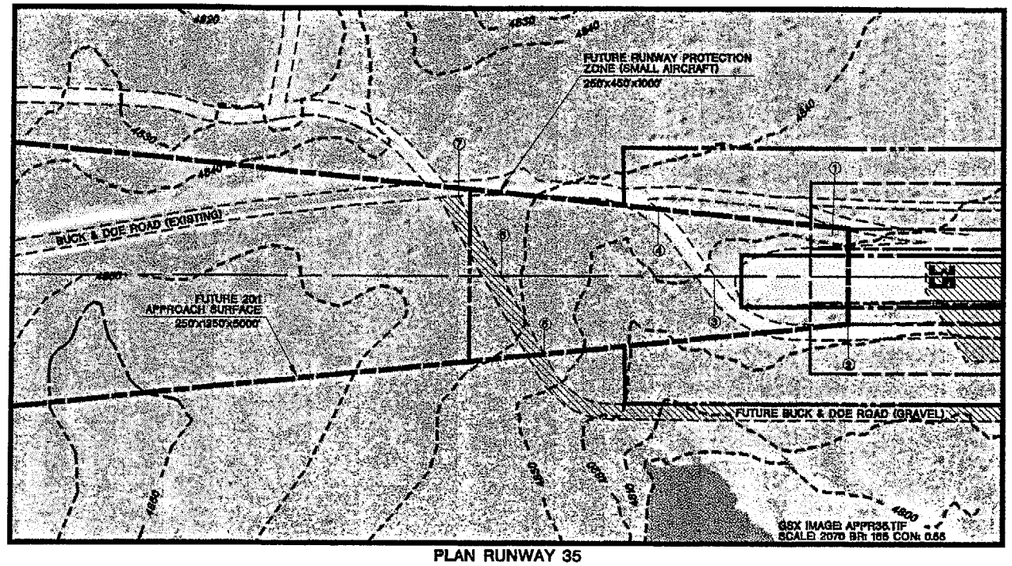
Revisions:

Project No: 945465
Date: 10/06/97
File Name: AIRSPACE

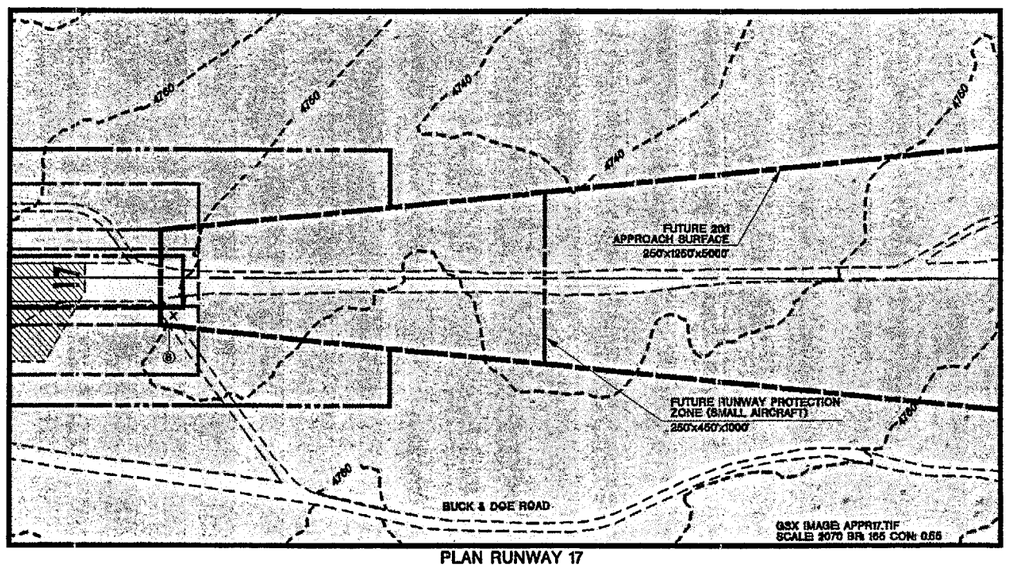
Drawn: MHM
Checked: DAC
Approved: EAA

AIRPORT AIRSPACE DRAWING

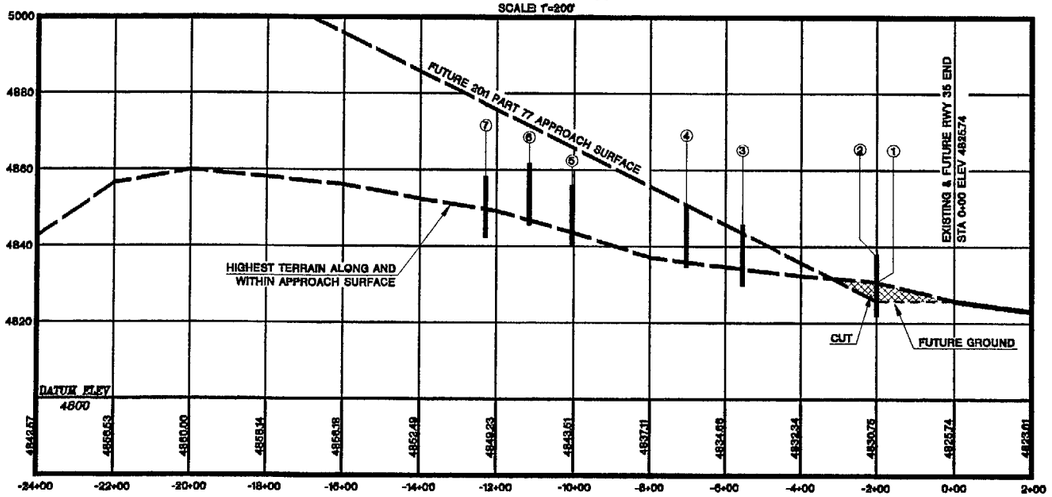
Sheet 3 of 8



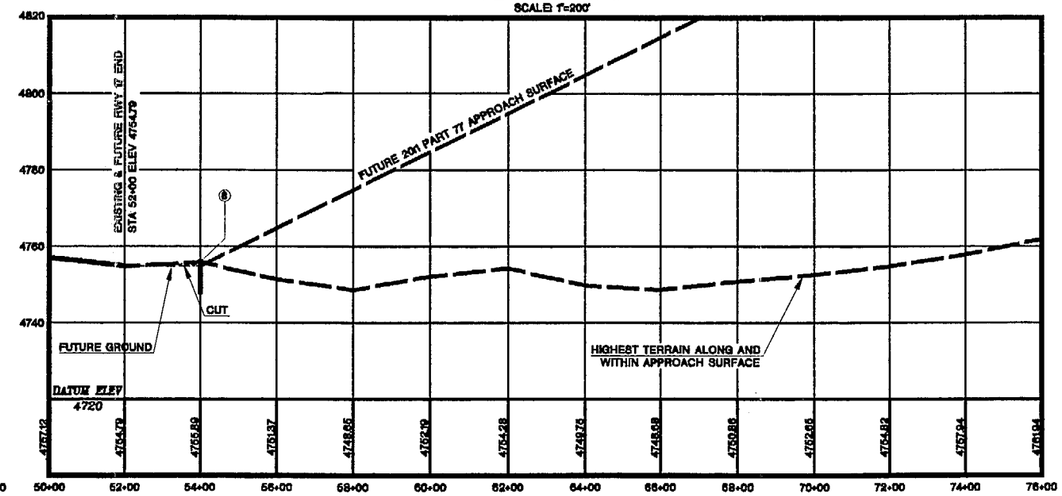
PLAN RUNWAY 35
SCALE 1"=200'



PLAN RUNWAY 17
SCALE 1"=200'



PROFILE RUNWAY 35
HORIZ. SCALE: 1"=200'
VERT. SCALE: 1"=20'



PROFILE RUNWAY 17
HORIZ. SCALE: 1"=200'
VERT. SCALE: 1"=20'

OBJECTS WITHIN RWY 35 INNER APPROACH SURFACE

NO.	OBJECT	TOP ELEVATION	AMOUNT OF PENETRATION (EXISTING & FUTURE)		PROPOSED ACTION
			PART 77	OBSTACLE CLEARANCE	
①	GROUND	4830.50	+4.76	N/A	CUT/REMOVE
②	BUCK & DOE RD (E)	4837.48	+11.74	N/A	RELOCATE ROAD
③	BUCK & DOE RD (E)	4845.31	+19.57	N/A	RELOCATE ROAD
④	BUCK & DOE RD (E)	4850.27	+0.57	N/A	RELOCATE ROAD
⑤	BUCK & DOE RD (F)	4855.58	-10.46	N/A	NONE
⑥	BUCK & DOE RD (F)	4861.25	-10.34	N/A	NONE
⑦	BUCK & DOE RD (F)	4857.85	-19.34	N/A	NONE

GRAPHIC SCALE

200 0 100 200 400 600
(IN FEET)
1 inch = 200 ft.

LEGEND

- EXISTING DEVELOPMENT
- FUTURE DEVELOPMENT
- CUT AND REMOVE
- APPROACH SURFACE
- EXISTING GROUND PROFILE
- AIRPORT PROPERTY LINE (APL)
- FUTURE AIRPORT PROPERTY LINE (FAPL)
- RUNWAY PROTECTION ZONE (RPZ)
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE ZONE (ROFZ)
- RUNWAY OBJECT FREE AREA (ROFA)
- BUILDING RESTRICTION LINE (BRL)
- 4830 EXISTING CONTOURS
- EXISTING ROAD (UNIMPROVED)

OBJECTS WITHIN RWY 35 INNER APPROACH SURFACE

NO.	OBJECT	TOP ELEVATION	AMOUNT OF PENETRATION (EXISTING & FUTURE)		PROPOSED ACTION
			PART 77	OBSTACLE CLEARANCE	
⑧	GROUND	4755.87	+1.08	N/A	CUT/REMOVE

ARMSTRONG CONSULTANTS

MAGNETIC DECLINATION
15° 00' 00"
SOURCE: ACI 1998

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1769

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

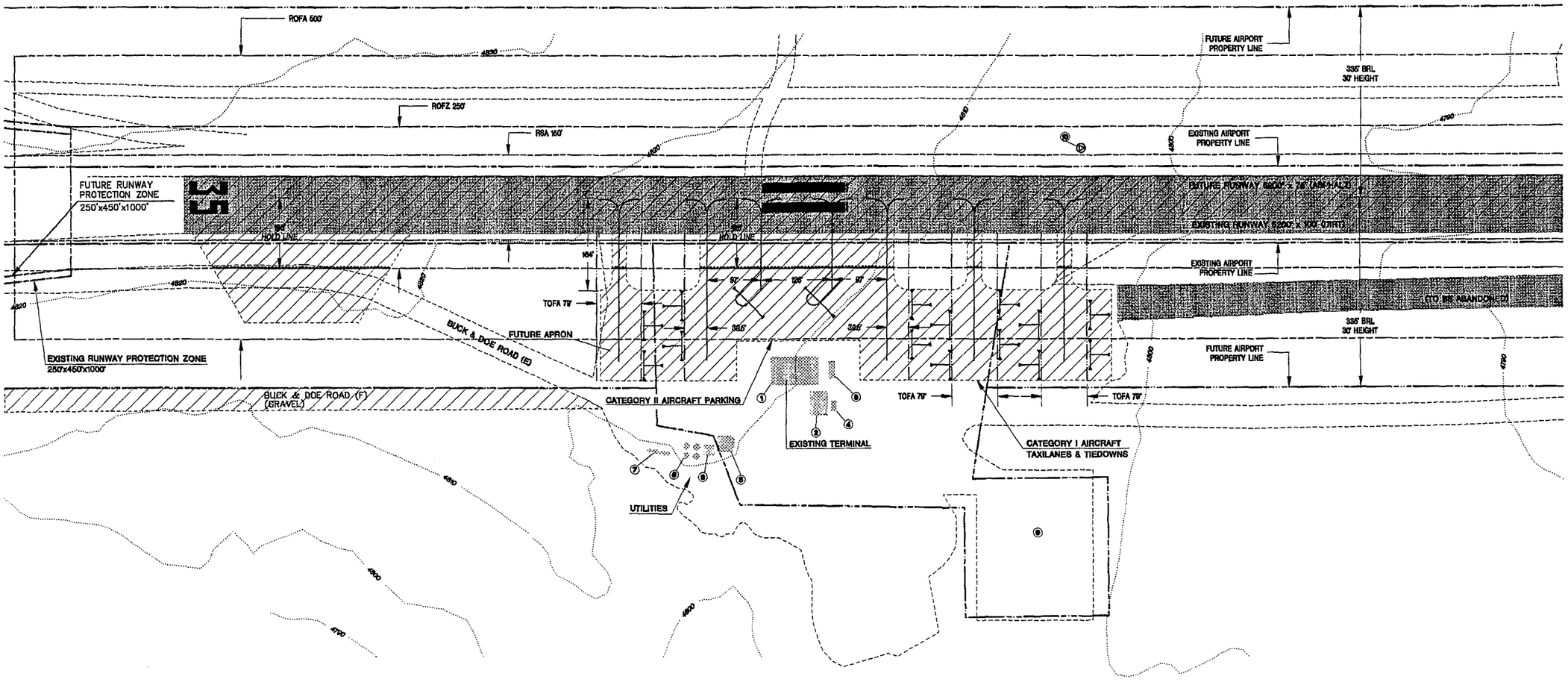
Revisions:

Project No: 945465
Date: 10/06/97
File Name: APPR1735

Drawn: MHM
Checked: DAC
Approved: EAA

INNER APPROACH RWY 17/35

Sheet 4 of 8



LEGEND

- EXISTING DEVELOPMENT
- EXISTING STRUCTURE
- FUTURE DEVELOPMENT
- EXISTING ROAD (UNIMPROVED)
- EXISTING AIRPORT PROPERTY LINE
- FUTURE AIRPORT PROPERTY LINE
- 4790 EXISTING CONTOURS
- RUNWAY PROTECTION ZONE (RPZ)
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE ZONE (ROFZ)
- RUNWAY OBJECT FREE AREA (ROFA)
- TAXIWAY/TAXILANE OBJECT FREE AREA (TOFA)
- BUILDING RESTRICTION LINE (BRL)
- WIND SOCK

MAGNETIC DECLINATION
15° 00' 00"
SOURCE: ACI 1996

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

METRIC CONVERSIONS

1 MILE = 1.6093 Km
1 YARD = 0.9144 METER
1 FOOT = 0.3048 METER
1 INCH = 2.54 CENTIMETERS

AIRPORT FACILITIES LIST

(E)-EXISTING

1. TERMINAL BUILDING (E)
2. PILOT LOUNGE (E)
3. PORTABLE LAVATORIES (E)
4. SEPTIC SYSTEM (E)
5. GENERATOR SHED (E)
6. WATER TANKS (E)
7. PROPANE TANKS (E)
8. WATER PUMP (E)
9. VEHICLE PARKING (E)
10. WIND SOCK (E)

ELEVATION OF STRUCTURES

FACILITY NO.	DESCRIPTION	OBJECT HEIGHT	ELEVATION (TOP)
1	TERMINAL BUILDING (WITH ANTENNA)	12 (25)	4822 (4835)
2	PILOTS LOUNGE	12	4822
3	PORTABLE LAVATORIES	7	4817
4	GENERATOR SHED	14	4824
5	WATER TANKS	10	4820
6	PROPANE TANKS	4	4814
7	WATER PUMP	9	4819
8	WIND SOCK	17	4827

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-7769

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

Revisions:

Project No: 945465
Date: 10/06/97
File Name: TAD

Drawn: MHM
Checked: DAC
Approved: EAA

TERMINAL AREA DRAWING

Sheet 5 of 8

LAND USE AND ZONING PLANS IN EFFECT

HUALAPAI INDIAN NATION

LAND DEVELOPMENT GUIDELINES

FUTURE AIRPORT PROPERTY: DESIGNATE SUFFICIENT LAND TO CONSTRUCT AIRFIELD IMPROVEMENT, SECURE RUNWAY PROTECTION ZONES, AND CONTAIN TO THE EXTENT POSSIBLE NOISE IMPACTS OF LDN 65 OR GREATER.

RUNWAY PROTECTION ZONES: CONTAIN WITHIN AIRPORT PROPERTY BOUNDARIES OR OBTAIN APPROPRIATE EASEMENTS.

APPROACH AREAS: PERMIT ONLY COMPATIBLE DEVELOPMENT. COMPLIANCE WITH THE HUALAPAI INDIAN TRIBE AND AIRPORT SAFETY ZONE POLICIES AND STRUCTURE HEIGHT LIMITATIONS TO CONFORM TO FAR PART 77 CRITERIA.

NOISE CONTOURS DNL OR GREATER DO NOT EXTEND BEYOND AIRPORT ENVIRONS.

AIRPORT INFLUENCE AREA/TRAFFIC PATTERN AIRSPACE: REVIEW ALL DEVELOPMENT PROJECTS FOR COMPATIBILITY AND COMPLIANCE WITH FAR PART 77 AND HUALAPAI INDIAN TRIBE LAND USE POLICIES WHICH MAY EXIST.

NOTE: THERE ARE NO SOLID WASTE LANDFILLS WITHIN 5 MILES OF THE GRAND CANYON WEST AIRPORT.

NOTE: ALL LAND IS OWNED BY THE HUALAPAI INDIAN NATION. PROPERTY LINES IDENTIFY LAND DESIGNATED FOR AIRPORT USE.

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Road Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1758

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

Revisions:

Project No: 945465
Date: 10/06/97
File Name: LANDUSE

Drawn: MHM
Checked: DAC
Approved: EAA

LANDUSE

Sheet 6 of 8

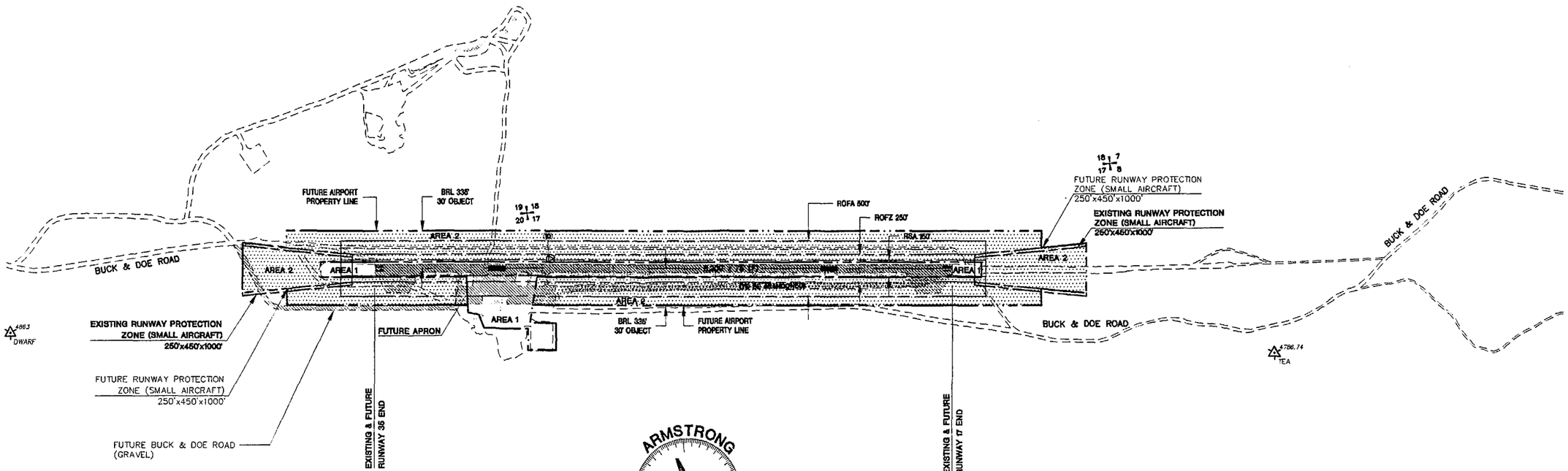
EXISTING AIRPORT PROPERTY						
AREA	CURRENT OWNER	PROPERTY INTEREST	RECORDING INFORMATION	DATE	ACRES	FEDERAL PARTICIPATION
1	HUALAPAI INDIAN NATION	DESIGNATED FOR AIRPORT USE	LEGAL DESCRIPTION	07/94	25.71	NONE

AIRPORT PROPERTY TO BE ACQUIRED				
AREA	CURRENT OWNER	PROPERTY INTEREST SEEKING	ACRES	PURPOSE OF ACQUISITION
2	HUALAPAI INDIAN NATION	DESIGNATED FOR AIRPORT USE	90.11	FUTURE AIRPORT USE

NOTE: ALL LAND IS OWNED BY THE HUALAPAI INDIAN NATION. PROPERTY LINES IDENTIFY LAND DESIGNATED FOR AIRPORT USE.

LEGEND

- EXISTING DEVELOPMENT
- EXISTING STRUCTURE
- FUTURE DEVELOPMENT
- PROPERTY TO BE ACQUIRED
- EXISTING ROAD (UNIMPROVED)
- EXISTING AIRPORT PROPERTY LINE (AREA 1)
- FUTURE AIRPORT PROPERTY LINE (AREA 2)
- RUNWAY PROTECTION ZONE (RPZ)
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE ZONE (ROFZ)
- RUNWAY OBJECT FREE AREA (ROFA)
- BUILDING RESTRICTION LINE (BRL)
- WIND SOCK
- CONTROL POINT (TEA 4785.74)
- SECTION CORNER (18 | 7 / 17 | 8)



ARMSTRONG CONSULTANTS

MAGNETIC DECLINATION
15° 00' 00"
SOURCE: ACI 1996

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 500 ft.

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1768

GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

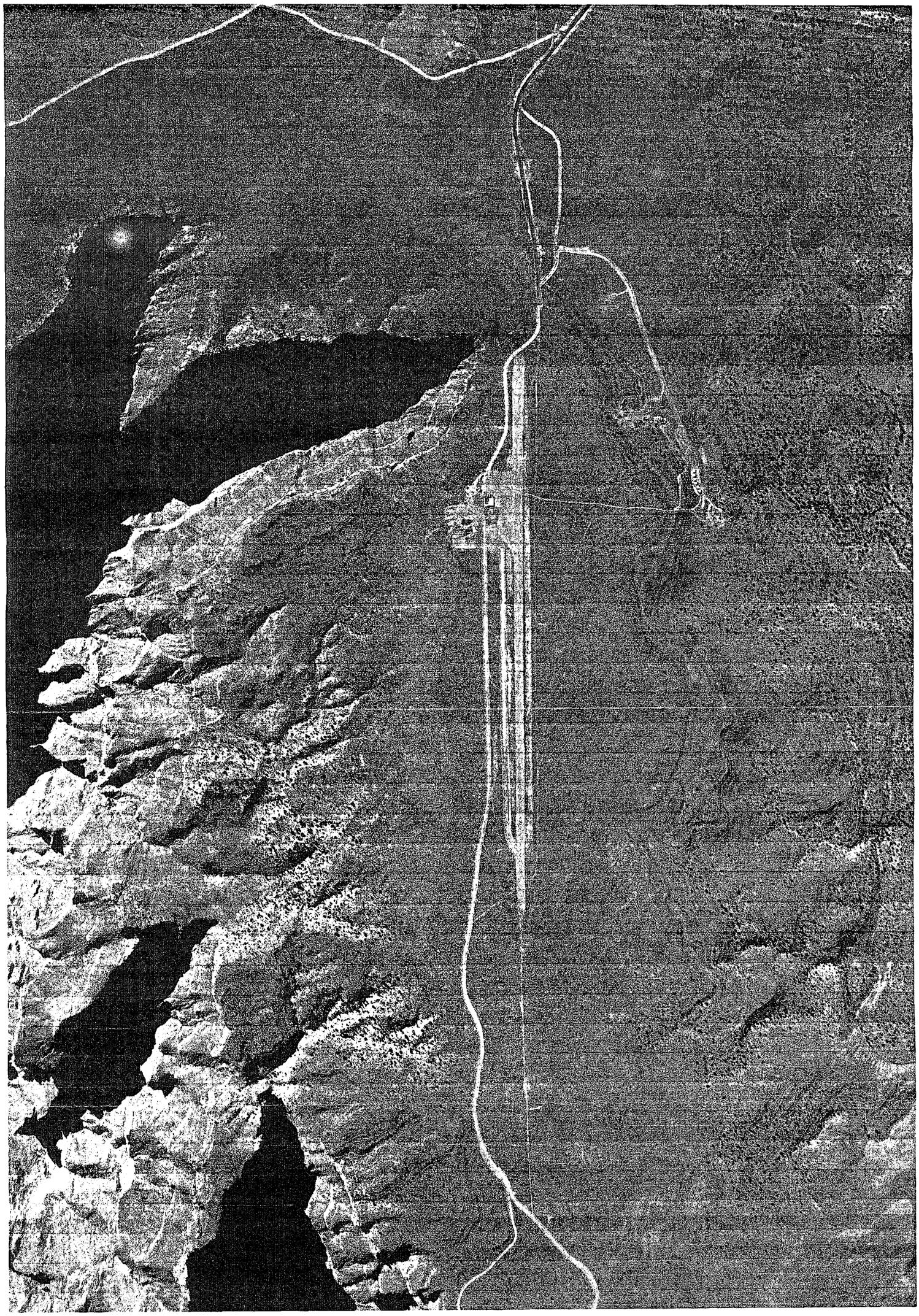
AIRPORT LAYOUT PLANS

Revisions:

Project No: 945465
Date: 10/06/97
File Name: EXHIBITA

Drawn: MHM
Checked: DAC
Approved: EAA

EXHIBIT "A"



GRAND CANYON WEST AIRPORT
MOHAVE COUNTY, ARIZONA

AIRPORT LAYOUT PLANS

Revisions:

Project No: 9453455
Date: 10/06/97
File Name: AIRPHOTO

Drawn: MFM
Checked: DAC
Approved: EAA

AERIAL PHOTOGRAPH

Sheet 8 of 8

ARMSTRONG CONSULTANTS, INC.
AIRPORT ENGINEERING, PLANNING & ENVIRONMENTAL STUDIES
861 Rood Avenue
Grand Junction, CO 81501
ph 970-242-0101 fax 970-241-1769